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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LEE, ANDREW CHUNG CHEUNG	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
09/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/021,205	CARVEY ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5,7,9,10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5,7,9,10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 1, 3, 5, 9, 7, 10 are pending.

2. Claims 2, 4, 6, 8, 11 – 14 had been canceled.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 5, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (US 6363077 B1) in view of Sohraby (US 6192049 B1).

Regarding claim 1, Wong et al. disclose the limitation of a network router (Fig. 1, element 10, packet switch as network router; column 4, lines 16 – 20) comprising: a plurality of trunk ports, including a composite port of plural ports to plurality trunks which serve as a composite trunk to a common destination (recited "a plurality of trunked links are formed by aggregating sets of four of the network links" as a plurality of trunk ports, including a composite port of plural ports to plurality trunks; column 4, lines 25 – 37); a routing fabric for transfer of data packets between trunk ports (recited "switching fabric" as routing fabric; Fig. 2, element 10 switch fabric; column 6, lines 35 – 62) and an output port selector (recited "a network output port arbitration sub-system" as an output port selector; column 8, lines 20 – 24, Fig. 3A) which selects an output port for a packet from

a composite port, the output port selector balancing load across the trunks of a composite trunk according to adjustable weighting (recited "a network output port arbitration sub-system" as an output port selector; column 8, lines 20 – 24, Fig. 3A" selects an output port for a packet from a composite port, the output port selector balancing load across the trunks of a composite trunk according to adjustable weighting; Fig. 2, element 168, column 6, 35 – 67; column 8, lines 20 – 24; also recited "the loading of each of the network links of each of the trunked links is proportional to the number of packets transmitted to the particular link, and is determined in accordance with the type of load balancing scheme" as adjustable weighting; column 5, lines 54 – 57).

Wong et al. discloses implicitly dynamically adjustable weighting ("implemented a dynamic trunked port mapping" correlates to dynamically adjustable weighting; column 5, lines 54 – 58, column 6, lines 27 – 34). Wong et al. do not disclose explicitly dynamically adjustable weighting.

Sohraby disclose explicitly the limitation of dynamically adjustable weighting (recited "performed at any time in order to dynamically adjust the call route in view of changing bandwidth availability" correlates to dynamically adjustable weighting; column 8, lines 52 – 62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include dynamically adjustable weighting as taught by Sohraby in order to provide switching fabric a simple and reliable structure for increasing network speed (as suggested by Sohraby, see column 3, lines 1 – 3).

Regarding claim 5, Wong et al. disclose the limitation of a method of routing packets in a network (recited "a local area network switch including a plurality of network ports for transmitting and receiving packets to and from network nodes via network links" as a method of routing packets in a network; column 2, lines 14 – 16) comprising: identifying a destination of the packets (recited "the packet having a source value and a destination address value indicating a destination node" as identifying a destination of the packets; column 2, lines 27 – 29); selecting one of plurality trunks forming a composite trunk to the destination, the trunk being selected with adjustable weighting to balance load across the trunk of a composite trunk; forwarding the packets toward the destination on the selected trunk (recited "a third packet is received from the high speed server at port B_4, the packet routing unit generates a destination port ID value indicating trunked port P_6 as the destination trunked port associated with the third packet, and the load balancing unit selects a destination port from ports $D_4 – D_7$ of the trunked destination port P6" as selecting one of plurality trunks forming a composite trunk to the destination, the trunk being selected with adjustable weighting to balance load across the trunk of a composite trunk; column 5, lines 41 – 51; also recited "the loading of each of the network links of each of the trunked links is proportional to the number of packets transmitted to the particular link, and is determined in accordance with the type of load balancing scheme" as adjustable weighting; column 5, lines 54 – 57; column 6, lines 20 – 26). Wong et al. also disclose implicitly dynamically adjustable to balance load across the trunks of a composite trunk (recited "dynamic trunked port mapping scheme" correlates

to dynamically adjustable to balance load across the trunks of a composite trunk; column 6, lines 20 – 26).

Wong et al. do not disclose explicitly dynamically adjustable weighting to balance load across the trunks of a composite trunk.

Sohraby disclose explicitly the limitation of dynamically adjustable weighting to balance load across the trunks of a composite trunk (recited "performed at any time in order to dynamically adjust the call route in view of changing bandwidth availability" correlates to dynamically adjustable weighting; column 8, lines 52 – 62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include dynamically adjustable weighting to balance load across the trunks of a composite trunk such as that taught by Sohraby in order to provide to provide switching fabric a simple and reliable structure for increasing network speed (as suggested by Sohraby, see column 3, lines 1 – 3).

Regarding claim 9, Wong et al. disclose the limitation of a method as claimed in claimed wherein the destination of the packets is identified from a final destination identifier included in the packet (recited "reads the destination address included in the header information of the data packet received via the network ports to determine a destination port of the packet" as destination of the packets is identified from a final destination identifier included in the packet; column 9, lines 22 – 24, 38 – 46).

5. Claims 3, 7, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (US 6363077 B1) in view of Fenner (5095480).

Regarding claim 3, Wong et al. disclose the limitation of a network router (Fig. 1, element 10, packet switch as network router; column 4, lines 16 – 20) comprising: a plurality of trunk ports, including a composite port of plural ports to plural trunks which serve as a composite trunk to a common destination (recited "a plurality of trunked links are formed by aggregating sets of four of the network links" as a plurality of trunk ports, including a composite port of plural ports to plurality trunks; column 4, lines 25 – 37); a routing fabric for transfer of data packets between trunk ports (recited "switching fabric" as routing fabric; Fig. 2, element 10 switch fabric, column 6, lines 35 – 62); and an output port selector (recited "Fig. 2, element 168, load balanced trunked link port mapping system" as an output port selector) which selects an output port for a packet from a composite port according to a table, the table routes being adjustable (recited "packet routing table" as table; column 8, lines 47 – 49, column 11, lines 29 – 45; recited "a network output port arbitration sub-system" as an output port selector; column 8, lines 20 – 24, Fig. 3A" selects an output port for a packet from a composite port according to a table, the table routes being adjustable; Fig. 2, element 168, column 6, 35 – 67; column 8, lines 20 – 24).

Wong et al. disclose implicitly wherein the table is dynamically adjustable to balance load across the trunks of a composite trunk (recited "dynamic trunked port mapping scheme" as the table is dynamically adjustable to balance load across the

trunks of a composite trunk; column 6, lines 20 – 26). Wong et al. do not disclose explicitly the table routes being dynamically adjustable.

Fenner discloses explicitly the limitation of the table routes being dynamically adjustable (recited "dynamic hashing and memory allocation techniques automatically adjust the size of the routing table" as the table routes being dynamically adjustable; column 4, lines 60 – 65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include the table routes being dynamically adjustable such as that taught by Fenner in order to provide a selection of approaches to allow graceful degradation of the routing efficiency when the memory available for routing tables is full, as suggested by Fenner, see column 4, lines 65 – 68.

Regarding claim 7, Wong et al. disclose the limitation of a method of routing packets in a network (recited "a local area network switch including a plurality of network ports for transmitting and receiving packets to and from network nodes via network links" as a method of routing packets in a network; column 2, lines 14 – 16) comprising: identifying a destination of the packets (recited "the packet having a source value and a destination address value indicating a destination node" as identifying a destination of the packets; column 2, lines 27 – 29); selecting one of plural trunks forming a composite trunk to the destination, the trunk being selected according to a table, the table routes being adjustable; and forwarding the packets toward the destination on the selected trunk (recited "packet routing table" as table; column 8, lines 47 – 49, column 11, lines 29 – 45, recited "a third packet is received from the high speed server at port B_4, the

packet routing unit generates a destination port ID value indicating trunked port P_6 as the destination trunked port associated with the third packet, and the load balancing unit selects a destination port from ports $D_4 - D_7$ of the trunked destination port P_6" as selecting one of plurality trunks forming a composite trunk to the destination; the trunk being selected according to a table, the table routes being adjustable; and forwarding the packets toward the destination on the selected trunk.

Wong et al. disclose implicitly wherein the table is dynamically adjustable to balance load across the trunks of a composite trunk (recited "dynamic trunked port mapping scheme" as the table is dynamically adjustable to balance load across the trunks of a composite trunk; column 6, lines 20 – 26). Wong et al. do not disclose explicitly the table routes being dynamically adjustable.

Fenner discloses explicitly the limitation of the table routes being dynamically adjustable (recited "dynamic hashing and memory allocation techniques automatically adjust the size of the routing table" as the table routes being dynamically adjustable; column 4, lines 60 – 65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include the table routes being dynamically adjustable such as that taught by Fenner in order to provide a selection of approaches to allow graceful degradation of the routing efficiency when the memory available for routing tables is full, as suggested by Fenner, see column 4, lines 65 – 68.

Regarding claim 10, Wong et al. disclose the limitation of a method of routing packets in a network (recited "a local area network switch including a plurality of network

ports for transmitting and receiving packets to and from network nodes via network links" as a method of routing packets in a network; column 2, lines 14 – 16), Wong et al. also teach network is Ethernet and route packet through Ethernet.

Wong et al. do not disclose explicitly the limitation of a method as claimed wherein the network is the Internet and the packets are routed under an Internet protocol.

Fenner discloses the limitation of a method as claimed wherein the network is the Internet and the packets are routed under an Internet protocol (recited "Internet router learns the location of these numbers within the network from the Internet protocol traffic" as wherein the network is the Internet and the packets are routed under an Internet protocol; column 5, lines 28 – 31, lines 41 – 50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wong et al. to include a method as claimed wherein the network is the Internet and the packets are routed under an Internet protocol such as that taught by such as that such as that taught by Fenner in order to provide a selection of approaches to allow graceful degradation of the routing efficiency when the memory available for routing tables is full, as suggested by Fenner, see column 4, lines 65 – 68.

Response to Arguments

6. Applicant's arguments filed on 6/21/2007 with respect to claims 1, 3, 5, 7, 9, 10 have been fully considered but they are not persuasive.

Regarding claims 1, 5, 9, applicant argues reference Wong does not describe "network router". Examiner respectfully disagrees. Since neither the disclosed subject

matter in the claims nor in the specification describes the network routing/forwading device or apparatus as layer 2 or layer 3 devices. Applicant fails to provide any claim language in the claim that interprets "network router". Examiner broadly interpreted network router or switch as network device/apparatus performing transmitting and receiving and routing/ forwarding packets. Examiner contends reference Wong does disclose the network switch or router as network device.

Applicant is reminded that although claims are read in light of the specification, limitations from the specification are not read into the claims.

Applicant also argues reference Wong does not describe "dynamically adjustable weighting". Examiner disagrees applicant's argument. Examiner contends reference Wong discloses implicitly the subject matter "dynamically adjustable weighting" (see column 5, lines 54 – 58, column 6, lines 27 – 34). Examiner contends reference Sohraby teaches explicitly "dynamically adjustable weighting" (see column 8, lines 52 – 62). However, the claimed subject matter "dynamically adjustable weighting" is not disclosed explicitly in applicant's specification, and Applicant fails to provide any claim language in the claim that interprets "dynamically adjustable weighting".

Regarding claims 3 and 7, applicant further argues reference Fenner does not disclose "the table routes being dynamically adjustable". Examiner contends reference Fenner disclose the claimed "the table routes being dynamically adjustable", see column 4, lines 60 – 65). However, reference Sohraby discloses implicitly the table routes being dynamically adjustable (column 5, lines 10 – 28).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Tsuchiya et al. (5115495) disclose apparatus and method for routing messages in a communications network having a plurality of communications stations interconnected by a plurality of communication links, and having at least one destination station.

b) Bernstein et al. (5155594) disclose a method and apparatus for transmitting a sequence of image frames by encoding interframe error data features the steps of compiling a spatially decomposed image of a background of the sequence of image frames, spatially decomposing a warped image of a previous frame, and spatially decomposing a new input image.

c) Meier (5748619) discloses data communication network for providing dynamic routing through both wireless and wired subnetworks to support wireless communication devices and wired remote stations.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan D. Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C. Lee/::<8/30/2007>

EDAN D. ORGAD
SUPERVISORY PATENT EXAMINER
Edan Orgad 9/4/07